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In November 2010, an international team organized by the Bavarian Contest Club (BCC) operated from Raoul Island (IOTA OC-Ø39) in the southwest Pacific. Fourteen hams used eight stations simultaneously to achieve more than 150,000 contacts within 17 days of operating time.

There's always the same question being raised after every successful DXpedition: What will be the destination for the next trip? The Bavarian Contest Club team led by Chris, DL1MGB, had already carried out two expeditions that turned out

well: first, Norfolk Island was activated using the call sign VK9DNX, followed by VK9DWX from Willis Island. For 2010, it took long discussions and lots of research until a new target was found. The team would go to the Kermadec Islands in the southwest Pacific. Apart from a few smaller activities, there had only been two major expeditions to this remote island group in recent years: a group from New Zealand, led by ZL2HU, made about 34,000 contacts in May 1996, and the international "Microlite Penguins" team achieved more than 40,000 QSOs in October 2006. In 2009, the "DX Magazine" ranked Kermadec number 28 on the list of most wanted DXCC entities. The demand for ZL8 contacts among the DX community was undoubtedly high. But first of all, lots of logistical and organizational questions would have to be cleared up.

The Kermadec Islands are situated about 600 miles northeast of New Zealand and consist of four larger islands as well

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# INDEXA

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Issue 94

A non-profit organization for the enhancement of amateur radio,  
worldwide peace, and friendship

Daily Information Session — 14.236 MHz @ 23:30z

## ZL8X: Pile Ups and Parrots By Felix Riess, DL5XL



The operating team and support cast take a few minutes from their compressed schedules to pose for a group photo.

inside... Wear the colors! INDEXA pin lets you do just that.

# ZL8X: Pile Ups and Parrots (Con'd)

(Continued from page 1)

as a number of barren rocks. There is no native population. Raoul Island, which was inhabited by Polynesian people in the 14<sup>th</sup> century, is the location of a permanently occupied meteorological station. Obviously, this would be the only place for us to set up our stations. All the previous expeditions had also operated from Raoul.

## Planning and Preparations

There was only one vessel that would be able to bring us to our destination: the expedition ship "Braveheart" which is based in Tauranga on New Zealand's North Island had already brought many DXpeditioners to rare DXCC entities, and the crew knows all about the requirements for running a successful DXpedition. Additionally, "Braveheart" regularly supplies the crew on Raoul Island with fuel and provisions. The ship's owner, Nigel Jolly, quickly agreed to help with obtaining the required landing permit which is only issued in rare circumstances.



The "Braveheart" has become a familiar home for DXpeditioners needing transport to islands.

With these important issues out of the way, assembling a team and preparing the equipment was the next step. In order to reach a six-digit QSO total and achieve a good rank in the all-time "top ten" DXpeditions, the number of operators and the stations would have to be increased compared to the previous operations. The capacities of the "Braveheart" set the limit for size of the team: the ship is not permitted to carry more than 14 passengers. But there was no need to limit the amount of equipment brought to the island. More than 2.5 tons of materials were collected at club station DR1A in Goch, Germany. Everything was neatly packed and shipped to New Zealand many months before the first contact would take place.

## Finally on the way!

The journey of the expedition participants began in November 2010. From Munich, we flew on a scheduled flight via Dubai and Sydney to Auckland. A bus brought

us to the harbor of Tauranga where "Braveheart" was already waiting for us. Our cargo had also arrived in time. The process of loading our equipment onto the vessel was strictly supervised by an officer of the New Zealand Department of Conservation. The islands have been declared a nature reserve in 1937. In the past decades, a lot of effort has been put into removing non-endemic plants and animals which were left on the Kermauds by European and American settlers in the 19<sup>th</sup> and early 20<sup>th</sup> century. This endeavor has so far been highly successful: between 2002 and 2006, rats and cats were completely eradicated. There are still volunteers working regularly on the island, removing weeds and other foreign flora. In order not to interfere with these goals, every piece of cargo had to be opened and checked for animals and plants. Even Velcro strips and shoe soles were closely examined, as small seeds might be hiding there!

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Inspection for non-native plant life is thorough!

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# ZL8X: Pile Ups and Parrots (Con'd)

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After this procedure, the sea voyage could begin. The passage to Raoul Island was scheduled to take three days. To get a first impression of radio conditions in this part of the world, we installed a dipole antenna and set up a transceiver on board the ship. The results were rather disillusioning: during the night and in the early morning hours, many callers picked up our weak signals, but during the day the log book only filled very slowly. The interest in operating the radio decreased significantly as the swell increased, and quite a few members of the team had to fight sea sickness in spite of using prophylactic medicine. The number of people that met at meal times got smaller every day!

## Arrival and Setup

In the early morning hours of November 18<sup>th</sup>, 2010, we had reached our destination: Raoul was in sight, and the landing operation could begin. The island, which is of volcanic origin, does not have any harbor facilities, and the rock rises steeply up out of the ocean in most areas of the shoreline. Therefore, all of the material had to be repacked into big bags which were subsequently brought ashore with a small dinghy. A ropeway for material transport, affectionately called "Flying Fox" by the locals, carried the cargo one by one onto the rock terrace where we would live for the next two weeks. This cumbersome procedure took all day. After everything was done, our hosts invited us for a welcome dinner.



The "Flying Fox" in operation.

Our accommodations were basic, but practicable: a shelter named "Woolshed" would be our headquarters, shack, and refectory during the DXpedition. There were several small rooms, a kitchen and two simple showers. We were also allowed to set up tents with the camp beds for the operators close to the building.



**Operations Headquarters—The "Woolshed", appropriately named on a New Zealand island.**

It was clear to everyone that our ambitious goals could only be reached if we used two different locations to set up the stations. There would have to be enough distance between these positions to operate two stations in the same band, using different modes, simultaneously. Thus we received additional permission to use an emergency landing strip for airplanes, located more than half a mile away, to set up more tents and antennas.

We had planned to install eight stations, each consisting of an Elecraft K3 transceiver, a power amplifier, a Microkeyer interface to control the radio, and a band filter to minimize mutual interference. For every HF band, there was one antenna at each of the two locations. Every operator's position had its own laptop running the WinTest software for logging. All of the computers were interconnected and formed a local network. A wireless link was used to transfer data between the "Woolshed" and the airstrip. This enabled every operator to communicate with the other stations and access the entire DXpedition log at all times. There were three generators at every location providing ample power to make sure our signal was really getting out.

In order to keep in touch with the DX community, an Inmarsat satellite connection was installed. This enabled us to access DX cluster information during our operation and react quickly to possible band openings. Additionally, we could update the online logbook on the ZL8X home page regularly, usually daily.

Setting up everything did not take more than two days. As everything was prepared thoroughly in advance, things went smoothly: we had packing lists for all pieces of cargo; the antennas had been pre-assembled, tuned and tested in Germany. The weather was kind to us, so that the worst problem some of the team members encountered during the installation was a distinct lack of sun protection which led to a few highly visible sunburns.

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# ZL8X: Pile Ups and Parrots (Con'd)

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For each band from 10m to 20m, we erected a mono-band Spiderbeam plus a 4 element array of vertical dipoles.



**"But it was so easy when we did this back home in Germany." (Just kidding!)**

The low bands were entirely served by vertical antennas: "Four Squares" for 20m, 40m and 80m with their well-dimensioned radial networks, converting the ground around the antennas into an entanglement of wires. On 160m, a Titanex vertical antenna (V160) which was 27m high made sure we were being heard. For reception, two beverage antennas of 200m each were put up. A specialized matching and distribution system enabled us to use these antennas at both locations. To make that work, more than 1000m of control line and coax cable had to be laid out.



**It is a good thing this Beverage hookup is temporary—in a few months troubleshooting might have become somewhat bewildering.**

## Filling up the ZL8X log book

Throughout the entire DXpedition, operating shifts followed a well-ordered time schedule which was based on propagation conditions. It was easy to work Asia and Oceania all day long, but band openings to North America and especially Europe always resulted in huge pile ups and had to be used as efficiently as possible. There were unambiguous operating rules to be followed by all operators, so that callers would be able to find our signals easily. For all bands, fixed frequencies had been published well in advance and were used whenever feasible. The split frequency range was kept within certain limits in order not to interfere with other stations. This was especially important as the ZK2A DXpedition took place almost simultaneously, and we did not want to make finding our listening frequency a lottery for the calling station.

ZL8X commenced operation on November 19<sup>th</sup>, 2010, at 07:02 UTC on 20m SSB. JA8ECS was the first station in the log, with N6VR being the first North American call sign only a few minutes later on 40m CW. The largest number of contacts was achieved on November 21<sup>st</sup>, 2010, when we were able to log 15,935 QSOs. By November 28<sup>th</sup>, 2010, the total number of QSOs had already exceeded 100,000.

After a few days of operating time, the log book became a useful and statistically relevant database to adapt our operating times and frequencies to the current conditions. A chart of CQ zones worked per hour and band was updated regularly, and it provided detailed information about the regions of the world we could work at any given time. DX cluster spots and e-mails also contained valuable data and questions, although we were not able to satisfy every wish. In more than a few cases, the requests were somewhat unrealistic: if stations in central Europe can hear West Australia which is about 9,000 miles away, it does not at all mean that the propagation path to the Kermadec Islands over a distance of almost 11,000 miles is open as well.

## CQ World Wide DX Contest: breaking a record?

One of the highlights of the DXpedition was undoubtedly our participation in the CW leg of the CQ World Wide DX Contest, held on the last weekend of November. During the contest period, the data network on Raoul Island was divided into two separate sub-nets: five operating positions were reserved for contest work, whereas the remaining three stations handed out "normal" contacts on the WARC bands. One of our goals was to break the current Oceania record in the Multi OP, Multi TX category which was set by KHØAM in 1992, when almost 24 million points and more than 11,000 QSOs were achieved. In the beginning, band openings to North America and Europe provided large pile ups, good QSO rates, and

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# ZL8X: Pile Ups and Parrots (Con'd)

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thus lots of points and multipliers. But on the second day, things slowed down significantly, so that we had to struggle up to the end until we finally achieved our aim: at the end of the contest, the WinTest software displayed a raw claimed score of 27,786,030 points and well over 11,300 contacts. This would exceed the old record by about 16%. We are quite optimistic that this will be enough to retain our winning margin even after log checking, so that we can claim a new Oceania record in the M/M category!

## Active from 6m to 160m

A few days after our first contact on HF, a 6m beacon was put into operation. We hoped that feedback on other bands or through the DX cluster would alert us of possible openings on the "magic band". But the result was initially rather disappointing: only one ZL station could be worked with a weak backscatter signal. We had to wait for more activity until two days before the expedition was scheduled to go QRT: on December 4<sup>th</sup>, 2010, ZL8X made about 70 contacts with Oceania stations. Unfortunately, this was the only time we were lucky with the conditions on 50 MHz. With three different DXCC entities worked, we surely did not break any records on 6m, so there's still a lot to do for future expeditions!

The results on 10m are not record breaking, either. The low solar activity did not help at all on this band. About 9,500 contacts were made, many of them with Asia and Oceania. With almost daily band openings, there's also a fair share of North American stations in the log, whereas the path to Europe was extremely difficult, and only about 8% of the QSOs on 28 MHz were with European stations, most of them with DXers from the southern part of the continent.

At the other end of the frequency spectrum, the outcome was much better: low band specialist Dietmar, DL3DXX, spent almost every night from dusk until long after sunrise on "top band" in order to make good use of all available propagation paths. It has been experienced by many DXpeditions that there are more than a few callers who keep on calling blindly on a QSX frequency that was announced on the cluster without actually hearing the DX. Dietmar tried to avoid this problem by frequently changing his listening spot. His success has proven him right: at the end of the operation, there were over 4,200 contacts on 160m in the ZL8X log book, with more than 1,000 European stations worked, which was undoubtedly the farthest and thus most difficult target from the Kermadecs.

## Daily Routine on the Island

The weather was rather unstable throughout our stay: it was only during camp setup that we could enjoy subtropi-

cal heat and sunshine. After that, there were frequent rain showers and storms, so that the dirt track between the two stations locations got muddier every day. Often, the operators did not only have to endure the usual QRM in the pile up, but had to fight noise from pattering rain and rattling tents, as well.

The "Braveheart" crew took good care of our physical well-being, so that we could fully concentrate on handing out ZL8 contacts. Provisions were regularly transported from the vessel to the island, and freshly prepared in the Woolshed. Whenever necessary, lunch and dinner were served right at the operating position, so that we would not lose a single call sign in the log. At least when working CW or RTTY, the QSO rate hardly suffers if the operator is having a meal during his shift. One of the most popular side dishes was a serving of baked beans—at any time of the day. This took some getting used to, but in the end it became part of the daily routine just like the discussion about the distribution of operating shifts. But providing food was not the only way in which the ship's crew contributed to the expedition's success: no matter whether it was setting up the tents, doing the laundry, or refilling the generators, Em, Broughton, Karl and Richard



**There is little time to relax in running a DXpedition, but when we did have a chance, WOW!**

were always there to help!

For the DXpeditioners, most of the days were just filled with operating, eating, and sleeping. But there were also two excursions organized for us by our hosts, so that we could get to know the island a little better. The Department of Conservation volunteers led us to the highest point of the island, Moumoukai Peak (1693 ft). There is a

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webcam installed close to the summit which can be viewed at <http://www.geonet.org.nz/volcano/activity/kermadec-islands/index.html>. Another destination for an outing was the "Blue Lake" which is one of two volcano crater lakes on Raoul Island. The densely wooded island is home to several endemic plants and animals. The Kermadec Red-crowned Parakeet, a predominantly green parrot with a crimson cap and eye-stripe, was particularly eye-catching.



**The Kermadec Red-crowned Parakeet always caused us to stop and take a look at his vibrant colors.**

### The last QSO

After 17 days of almost uninterrupted operation, the moment to dismantle the stations and pack up all equipment had eventually arrived. Just like the setup, everything went off without a hitch. The only additional chore was to clean mud and dirt off ground anchors, antennas, and cables. When all the other stations were already packed and seaworthy, our top band signal was still on the air, so that we could use the last night on the island for a few more contacts. Finally, on December 6<sup>th</sup>, 2010, UT1AN was the very last station in the log at our local sunrise.

To celebrate the successful completion of the DXpedition, we had a party together with the staff of the Raoul Island station on the last evening. After the compulsory group photo, there was an improvised volleyball match—Germany vs. New Zealand. Presents and souvenirs were exchanged, and we enjoyed a barbecue, fresh salads and mouth-watering desserts, served by our hosts. We contributed the remaining stock of beer and wine to the buffet table. Later that night, we were let in on some of the meteorological station's secrets. There is a local brewery, and the staff also has a so-called "dressing room" in which a large selection of Carnival costumes,

wigs and accessories provides ample material for a great fancy dress party. Of course, this was our invitation to dress up! One DXpeditioner who had to suffer a lot from "frequency cops" during the previous days was seen late at night wearing a police uniform. . . .

In spite of the party, our last day on the island began very early, as we had been operating as long as possible, so now the cargo had to be brought back onto the "Braveheart" as quickly as possible to make sure we would still arrive in Tauranga on time. But whenever nothing must go wrong, Murphy's Law strikes: after a few bags had been carried down the rock on the Flying Fox, one of the steel ropes parted. Neither the ZL8X team members nor the Raoul Island crew had any experience with repairing this means of transport, which is vital for the islanders. Several hours passed until the rope could finally be mended with little material and lots of improvising. To avoid any further risks, a few heavyweight boxes were unpacked and their contents distributed into several smaller bags. The Flying Fox then slowly carried our material down to the boat's landing place until after dusk. It was late at night when all the material had finally been stored away on the vessel and the return trip to New Zealand could begin with only a few hours of delay.

The passage to Tauranga was uneventful. A few cases of mild sea sickness were once again observed, and the team members had apparently lost their interest in pile ups for the time being – no one took the initiative to set up a maritime mobile station. After the arrival in New Zealand, there was one day left to sort the material, prepare everything for shipping and have dinner with the "Braveheart" crew. We raised glasses to the successful activation of a much sought after DXCC entity. Only a few days later, the "Braveheart" left her home harbor and sailed to South America to pick up another group of ham radio operators—the VP8ORK team was already waiting to put another rare country on the air!

### Back Home

There's still a lot of work to be done after the return of the operators to their home countries in Europe. Even though all computers were interconnected and the individual log files should be synchronized, there were some mismatches between the log book data of the different operating positions which had to be looked into manually. The team's mailbox was full with literally thousands of e-mails with questions about call signs logged and requests for QSL cards. A few weeks after the expedition, the sea freight with all the equipment arrived in Germany and had to be unpacked, cleaned, and prepared for the next journey. There were hundreds of photos to be sorted, so that the most beautiful ones could be chosen for two attractive full-color QSL cards.

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# ZL8X: Pile Ups and Parrots (Con'd)

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Altogether, there are 148,857 QSOs in the log book, 57% of them in CW, 32% in SSB, and 11% in RTTY. This puts us on rank #4 of OH2BU's all-time record list of DXpeditions, behind VP6DX (183,686), D68C (168,722), and 3B9C (153,113). A few new records were set, such as the largest number of QSOs with Asia (38,834) and Oceania (4,018). A total of 16,841 RTTY contacts also make ZL8X a very successful digital DXpedition. 31,219 different call signs from 194 DXCC entities have been worked, fulfilling basic DXCC requirements in all three modes and on seven different bands.

The entire logbook has been uploaded to ARRL's "Logbook of the World" in February 2011, so every awards hunter can quickly claim ZL8 credit towards DXCC. The expedition's QSL manager Mario, DJ2MX, became a very busy man. Thousands of QSL inquiries have to be checked against the log and replied to. To make his life a little easier, an "Online QSL Request" system has been set up, which makes it possible to request a printed QSL card electronically. These cards will either be sent by mail (for a small donation), or via the QSL bureau (free of charge). Nevertheless, there are still many paper QSL requests arriving the old fashioned way through the postal service, as well as the national society.

## Supporters and Sponsors

An expedition of this dimension would not be possible without the support of many people and institutions. We would like to name just a few of them: first of all, we'd like to thank our wives, girl friends, and families for their understanding, the team of R/V "Braveheart" (Matt, Em, Broughton, Karl und Richard and Raoul Island team (Jess, Terry, Sian, Nicki, Maree, Tim, Toby und Nigel) for their great support, the entire DX community (NCDXF, GDXF, INDEXA, and many other clubs and individuals) for their financial contributions, many contacts, good behavior in the pile up and lots of friendly comments in the guest book on the web site, by e-mail and on QSL cards, SQ8X for the outstanding QSL design and the "QSL Shop" company in Berlin for printing high quality QSL cards. At the end of the day, there's only one question that remains (adapted from OH2BH):

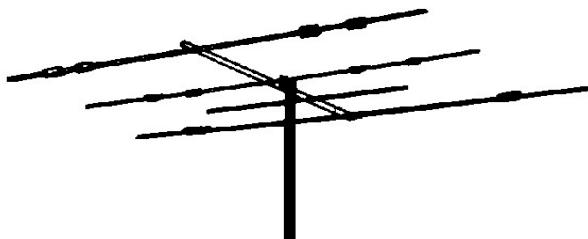
**Where do we go next?**

Band	CW	SSB	RTTY	Total
160m	4001	205	0	4206
80m	7515	2909	0	10424
40m	12586	8308	2010	22904
30m	11158	0	3304	14462
20m	13243	11307	3230	27780
17m	9917	8383	2644	20944
15m	14075	9288	3149	26512
12m	6013	4278	1469	11760
10m	5501	2970	1035	9506
6m	24	49	0	73
	84033	47697	16841	148571

Table 1: QSO Statistics

DJ5IW	Gerd Richter
DJ7EO	Markus van Bergerem
DJ9RR	Heye Harms
DK1II	Dr. Franz Nieberding
DL1MGB	Christian „Chris“ Janßen
DL3DXX	Dietmar Kasper
DL5CW	Andreas „Andy“ Paulick
DL5LYM	Thomas „Tom“ Koglin
DL5XL	Felix Riess
DL6FBL	Bernd „Ben“ Och
DL8LAS	Andree Schanko
DL8OH	Dieter Schuster
SP5XVY	Robert Lusnia
SV2KBS	Victoria „Vicky“ Panagiotou

Table 2: List of Operators



## INDEXA Member Insignia

When you go to Dayton, Friedrichshafen, or your local hamfest, would you like to show in a small, but classy way that you are a member of INDEXA?

There is a solution that is available but perhaps is not known to you.



The INDEXA pin shown above measures 2.5mm high by 2.0mm wide (Approximately 1" tall by 0.8" wide.) It is gold plated with a stick pin back for your lapel or hat and an enameled colored background. Available postpaid for \$10.00 from INDEXA's Secretary-Treasurer, Bill Jennings. Pins can be ordered via the INDEXA webpage under the "Membership" tab.

Also available from INDEXA is a rubber stamp of the logo for your correspondence or your QSL cards. Payment for either or both can be done using PayPal.

## Election of Officers, Directors Underway

On August 1, an email informed all qualified members that online ballots for electing INDEXA officers and directors for the year 2011-12 are available. Voting is easily performed online, and it only takes a few minutes. Please exercise your voting privilege.

If you did not receive the email, your dues for the coming year have not yet been received by Bill, and you are in the membership grace period. Please renew now to continue receiving the newsletter and to continue supporting DXpeditions.



*Generator? I thought you brought it...*

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